



**PATENT**  
**Case SU-7155-C**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**JONATHAN N. HOWARTH ET AL.**

**SERIAL NO.: 10/688,125**

**FILED: OCTOBER 17, 2003**

**MICROBIOLOGICAL CONTROL IN  
AQUEOUS SYSTEMS**

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Enclosed herewith for consideration by the Examiner is an Information Disclosure Form PTO-1449 (modified). A copy of each listed document should be in the file of the parent application serial numbers 109/974,626, filed 10/09/2001; 09/484,938, filed January 18, 2000 and application serial number 09/775,516, filed February 2, 2001, of which the present application is a Division. However, if additional copies are needed, they will be supplied on request.

Respectfully Submitted,


John F. Sieberth  
Reg. No. 17,704  
Associate Attorney of Record

Telephone: (225) 291-4600  
Facsimile: (225) 291-4606

**CERTIFICATE OF MAILING**

I hereby certify that this paper (along with any referred to as being attached or enclosed) is being deposited on the date shown below with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Date

FORM PTO-1449 (Modified) LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary) (Page 1 of 5)																				ATTY. DOCKET NO.: SU-7155-C										SERIAL NO.: 10/688,125									
APPLICANT: JONATHAN N. HOWARTH ET AL.																																							
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REFERENCE DESIGNATION																																							
U. S. PATENT DOCUMENTS																																							
EXAMINER INITIAL	CITE NO.	DOCUMENT NUMBER								DATE	NAME					FILING DATE IF APPROPRIATE																							
	US-1	2	1	3	0	8	0	5	09-20-1938	Levine																													
	US-2	2	3	9	2	5	0	5	01-8-1946	Rogers																													
	US-3	2	3	9	8	5	9	8	04-16-1946	Rogers																													
	US-4	2	7	7	9	7	6	4	01-29-1956	Paterson																													
	US-5	2	7	9	5	5	5	6	06-11-1957	Quinn																													
	US-6	2	8	6	8	7	8	7	01-13-1959	Paterson																													
	US-7	2	9	2	0	9	9	7	01-12-1960	Wolf et al.																													
	US-8	2	9	7	1	9	5	9	02-14-1961	Waugh et al.																													
	US-9	2	9	7	1	9	6	0	02-14-1961	Waugh et al.																													
	US-10	3	1	2	1	7	1	5	02-18-1964	Waugh et al.																													
	US-11	3	1	4	7	2	5	9	09-01-1964	Paterson																													
	US-12	3	3	4	5	3	7	1	10-03-1967	Paterson																													
FOREIGN PATENT DOCUMENTS																																							
	CITE NO.	DOCUMENT NUMBER								DATE	COUNTRY					TRANSLATION YES NO																							
	FP-1	1	2	3	0	8	2	5	12-29-1987	Canada																													
	FP-2	2	0	4	2	4	3	0	11-30-1991	Canada																													
	FP-3	2	1	6	3	5	9	6	09-04-1996	Canada																													
	FP-4	0	1	7	7	6	4	5	04-16-1986	EPO																													
	FP-5	0	2	0	6	7	2	5	12-30-1986	EPO																													
	FP-6	0	2	2	8	5	9	3	07-15-1987	EPO																													
	FP-7	0	5	8	1	8	2	6	02-09-1994	EPO																													
OTHER ENCLOSED DOCUMENTS																																							
	CITE NO.																																						
	L-1	Corral et al., "Substitution in the Hydantoin Ring. III. Halogenation", J. Org. Chem., 1963, Vol. 28, ppg. 1100-1104.																																					
	L-2	Jolles, "General Methods of Bromination", Bromine and its Compounds, 1966, Ernest Benn, London, ppg. 365.																																					
	L-3	Markish et al., "New Aspects on the Preparation of 1,3-Dibromo-5,5-Dimethylhydantoin", Ind. Eng. Chem. Res. 1995, Vol. 34, ppg. 2125-2127.																																					
	L-4	Orazi et al., "Halogenacion con 3-Bromo-5,5-Dimetil-Hidantoina", Anales Assoc. Quim. Argentina, 1949, Vol. 37, ppg. 192-196. (Not translated)																																					
	L-5	Orazi et al., "Halogenacion Con 1,3-Dibromo-5,5-Dimetil-Hidantoina", Anales Assoc. Quim. Argentina, 1950, Vol. 38, ppg. 5-11. (Not translated)																																					
	L-6	Gottardi: Reaction of Cl Br - In Aqueous solution (76 Zentralbk. Bakteriell. Parasiteukd.) In Fektiensk. Ilyg. Abt. 1; Orig., Geihe B 162 (3-4), 384-8.																																					
EXAMINER	ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /N.L./																																						
EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609: Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.																																							

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FORM PTO-1449 (Modified)  
LIST OF PATENTS AND PUBLICATIONS FOR  
APPLICANT'S INFORMATION DISCLOSURE  
STATEMENT  
(Use several sheets if necessary)  
(Page 2 of 5)

ATTY. DOCKET NO.: SU-7155-C

SERIAL NO.: 10/688,125

APPLICANT: JONATHAN N. HOWARTH ET AL.

FILING DATE: OCTOBER 17, 2003

GROUP:

REFERENCE DESIGNATION

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EXAMINER INITIAL	CITE NO.	DOCUMENT NUMBER	DATE	NAME	FILING DATE IF APPROPRIATE
	US-13	3 6 2 6 9 7 2	12-14-1971	Lorenzen	
	US-14	4 0 7 8 0 9 9	03-07-1978	Mazzola	
	US-15	4 1 1 9 5 3 5	10-10-1978	White et al.	
	US-17	7 1 2 6 7 1 7	11-21-1978	Mazzola	
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	US-17	7 1 9 9 6 0 1	04-22-1980	Kratz	
	US-17	7 2 1 2 7 1 6	12-30-1980	Daugherty et al.	
	US-20	6 1 7 0 5 6 6	06-02-1981	King, Sr.	
	US-21	7 2 4 4 6 2 5	10-06-1981	Price	
	US-21	7 3 2 7 1 5 4	04-22-1981	Mazzola	
	US-23	4 4 3 1 7 7 4	05-25-1982	King, Sr.	
	US-26	4 7 2 7 6 4 2	01-24-1984	Girard	
	US-26	4 7 4 4 3 7 6	05-29-1984	Sharp	
	US-26	4 4 6 4 6 4 9	08-14-1984	Schulte et al.	
	US-27	4 5 4 7 6 4 0	07-30-1985	Cole	
	US-26	4 4 4 7 6 9 7	08-27-1985	Girard	
	US-26	4 6 6 0 7 6 6	12-24-1985	Girard et al.	
	US-30	1 5 7 4 6 3 3	08-14-1986	Hsiao et al.	
	US-30	4 4 4 7 9 4 4	07-01-1986	Bottom et al.	
	US-32	4 6 7 4 0 9 6	11-04-1986	Cole	
	US-33	4 6 6 4 4 7 4	03-31-1987	Girard et al.	
	US-34	4 6 4 9 6 4 9	04-21-1987	Lorenz et al.	

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	CITE NO.	DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	NO
	FP-8	1 0 4 7 1 7 4	01-1967	Great Britain		
	FP-9	4 6 0 0 7 6 9	10-14-1981	United Kingdom		
	FP-12	2 2 7 3 7 0 6	06-02-1981	Great Britain		
	FP-12	56 4 4 6 3 3 4	12-07-1981	Japan	X	
	FP-12	7 2 9 9 7 6 6	11-14-1995	Japan	X	

OTHER ENCLOSED DOCUMENTS - NON PATENT LITERATURE

	CITE NO.	
	L-9	March, "Advanced Organic Chem", 1992, 4 <sup>th</sup> Edition, ppg. 639-640
	L-9	HCAPLUS Abstract of JP 07171576 A2 issued 1995
	L-9	HCAPLUS Abstract of JP 07277912 A2 issued 1995
	L-10	HCAPLUS Abstract of JP 08027119 A2 issued 1996

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EXAMINER INITIAL	CITE NO.	DOCUMENT NUMBER	DATE	NAME		FILING DATE IF APPROPRIATE
	US-35	4 6 6 2 3 8 7	05-05-1987	King, Sr.		
	US-36	4 6 7 7 1 3 0	06-30-1987	Puriz		
	US-37	4 6 9 8 1 6 5	10-06-1987	Thcyson		
	US-39	4 7 1 3 5 7 5	12-15-1987	Chun et al.		
	US-39	4 7 7 5 7 8 8	03-01-1988	Choy		
	US-40	4 7 4 8 1 8 8	05-17-1988	Lee et al.		
	US-49	4 5 3 5 7 5 7	10-25-1988	Schuman		
	US-42	4 6 6 3 5 7 5	02-07-1989	Hsiao et al.		
	US-49	4 8 5 7 8 5 3	05-17-1988	Choy		
	US-44	4 8 6 6 6 8 3	04-24-1990	Kamel et al.		
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	US-44	4 8 8 4 8 8 3	10-23-1990	Hsu		
	US-47	4 8 7 5 3 6 6	12-31-1991	King		
	US-43	5 7 3 8 5 6 3	08-11-1992	Valkanss		
	US-49	5 7 6 6 2 6 3	06-15-1993	King		
	US-52	5 3 3 8 8 6 6	08-16-1994	Jones		
	US-53	5 6 6 6 8 6 6	08-23-1994	Bigham		
	US-52	5 6 8 6 6 6 3	01-24-1995	Ferguson et al.		
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	US-57	5 8 5 5 8 7 5	10-15-1996	Hall et al.		

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	FP-15	5 5 7 5 7 8 7	05-01-1997	WIPO	
	FP-16	5 7 3 5 8 3 7	06-12-1997	WIPO	

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L-11	Chowhan et al., "Hardness Increase Induced by Partial Moisture Loss in Compressed Tablets and Its Effect on In Vitro Dissolution", J. Pharm. Sciences, October 1978, Vol. 67, No. 10, ppg. 1385-1389.
L-12	Krycer et al., "An Evaluation of Tablet Binding Agents Part II: Pressure Binders", Powder Technology, 1983, Vol. 34, ppg. 53-56.
L-13	Peterson, "N-Halogen Compounds. I. Decomposition of 1,3-Dichloro-5,5-dimethylhydantoin in Water at pH 9", J. Org. Chem., 1959, Vol. 24, pp. 1414-1419.

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	US-58	5 5 7 8 5 5 9	11-26-1996	Dolan et al.	
	US-59	5 5 9 1 6 9 2	01-07-1997	Jones et al.	
	US-60	5 6 0 3 9 4 1	02-18-1997	Farina et al.	
	US-61	5 6 6 0 8 2 6	03-11-1997	Barford et al.	
	US-67	9 9 6 4 9 7 4	03-25-1997	Jones et al.	
	US-63	5 6 7 0 8 5 6	09-23-1997	Jones et al.	
	US-64	5 7 5 0 0 4 9	05-12-1998	Farina et al.	
	US-65	5 7 5 3 8 0 7	05-19-1998	Hung et al.	
	US-68	9 7 5 8 8 4 4	05-26-1998	Watanabe et al.	
	US-67	5 7 4 4 4 7 4	06-09-1998	Ward et al.	
	US-63	5 7 9 0 8 4 9	07-14-1998	Yorushimi et al.	
	US-69	9 9 9 0 9 9 9	01-12-1999	Plett	
	US-73	9 5 9 2 9 5 3	08-24-1999	Heydel	
	US-72	9 9 9 8 9 9 9	09-28-1999	Watanabe	
	US-72	9 9 7 9 9 9 9	10-26-1999	Counts	
	US-73	5 9 9 9 9 4 9	11-09-1999	Counts et al.	
	US-74	9 9 9 9 9 9 9	11-16-1999	Hudson	

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	DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES NO
	FP-18 9 7 2 9 9 9 9	06-12-1997	WIPO	
	FP-18 9 7 4 9 9 9 9	11-20-1997	WIPO	
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L-14	HCAPLUS Abstract of JP 08239609 A2 issued 1996
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L-16	HCAPLUS Abstract of JP 09227317 A2 issued 1997
L-17	Hayward America's #1 Pool Water Systems Product Catalog, "Automatic Chemical Feeders" "Chlorinators (Slow Dissolve Tri-Chlor Only) and Brominators, Hayward Pool Products Inc. Website, <http://www.haywardnet.com/products/catalog/displayProdInfo.cfm?itemID=61>, 2 pages.
L-19	Author unknown, "Big Brother Brominator - Brominators", Bulky Systems Website, <http://www.bulkysystemsinc.com/brominator.html> (Visited August 10, 2001), 1 page
	Hayward Pool Products Owner's Guide, Installation and Operating Instructions, "Hayward Chemical Feeder", Models C250CF, C500CF, C1100CF, C1800CF, C2400CF, - 1998 - 4 pages
L-20	Hayward America's #1 Pool Water Systems Product Catalog, "Automatic Chemical Feeders" "Chlorinators (Slow Dissolve Tri-Chlor Only) and Brominators, Buyers Guide, Hayward Pool Products Inc., Website, <http://www.haywardnet.com/products/catalog/displayProdInfo.cfm?itemID=60>, 2 pg
L-21	Pentair Pool Products Brochure, "Rainbow High Capacity Chlorine/Bromine Feeders", "Unsurpassed Performance From The Industry's Leader in Automatic Sanitizing of Large Residential and Commercial Pools", date unknown, 1 page. /Neil Levy/

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